

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE TITLE:

The title is changed as follows:

IN THE SPECIFICATION:

The specification is changed as follows:

Page 4, amend the paragraph bridging pages 4 and 5, beginning with "This object is achieved" as follows:

This object is achieved by a method for the heat treatment of shaped bodies made of a superconducting material based on (Y/Rare Earth)BaCuO, which is characterised in that a coating consisting of a coating material is applied to at least one part of the surface of the shaped body, whereby the coating material melts at least partially at a lower temperature than the material of the shaped body or/and is flowable at a lower temperature than that material and material and, possibly hereby, flows out over the surface of the shaped body, whereby the shaped body together with the applied coating material is heated to a temperature at which the material of the shaped body does not yet melt or/and is not yet flowable but at which the coating material is at least partially softened by the heat or/and is in a flowable state, and whereby at least one part of a region of the shaped body located near the surface is modified at this temperature or/and during a succeeding cooling process in that the coating material infiltrates partially or at least partially into the region of the shaped body located process near the surface, and wherein the shaped body treated in such a manner is enriched with oxygen during the cooling process or/and during a succeeding heat treatment whereby the modification contributes to the increase in remanent induction or/and to the increase in critical current density of the shaped body enriched with oxygen.

Page 19, amend the third full paragraph beginning with "Preferably, the shaped body" as follows:

Preferably, the shaped body is a cylinder, a ring, a tube or a disc consisting substantially of one or more segments wherein the alignment of the c-axes of the grains or of the one grain is substantially in line with the axis of the cylinder / the axis of the plate, or with another main direction of the shaped body, or, it is at right angles thereto.

Page 20, amend the first full paragraph beginning with "The shaped body may have" as follows:

The shaped body may have a critical transport current density of at least 4×10^4 A/cm² in the external field of 1 T at 77 K, preferably of at least 6×10^4 A/cm², and particularly preferred of at least 8×10^4 A/cm², but more especially, of at least 9.7×10^4 A/cm². It may also have a fracture toughness as determined by the fracture system about the hardness impressions of at least 1 Mpa \sqrt{m} , preferably of at least 1.5 Mpa \sqrt{m} . Furthermore, it may have a bending strength of at least 300 MPa and preferably of at least 400 MPa.

Amend the last paragraph beginning with the heading "Drawings" as follows:

Drawings:

The Figures depict the distribution of the magnetic remanent induction in respect of Example 1. ~~Figure 1 indicates~~ Figures 1 and 3 indicate the test results for the preliminary material and ~~Figure 2~~ Figures 2 and 4 the test results for the superconducting material that has been heat treated in accordance with the invention.

Page 24, amend the paragraphs under the heading "Example 2" as follows:

Example 2:

As in Example 1, a texturised shaped body having dimensions of 38 x 38 x 12 mm³ was produced. However, diverging from Example 1, Er-123 was used as the coating material. The distribution of the remanent induction following the texturising process resulted in a maximum value $B_{z,max}$ of the remanent induction of 902 mT (Figure 3).

Preliminary Amendment
Attorney Docket Q65149

The shaped body together with the coating material was then subjected to the following temperature treatment:

1. heating over 12 h to 900 °C
2. heating over 3 h to 980 °C
3. a dwell period of 3 h at 980 °C
4. cooling over 2 h to 970 °C
5. a dwell period of 10 h at 970 °C
6. cooling over 60 h to 900 °C
7. cooling over 30 h to 25 °C.

The measured distribution of the remanent induction following the infiltration process (= heat treatment) resulted in a maximum value $B_{z,\max}$ of 990 mT (Figure 4).